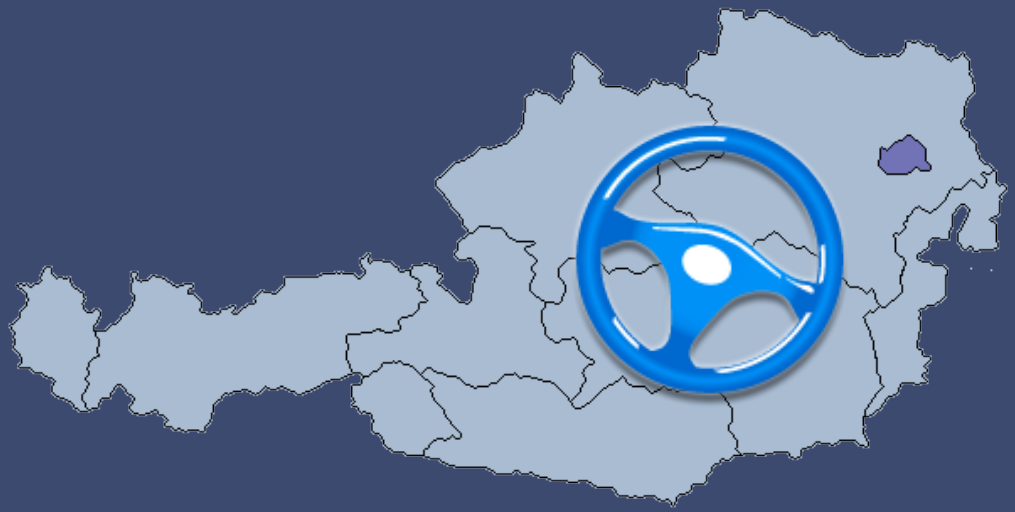
KFV
Kuratorium für Verkehrssicherheit

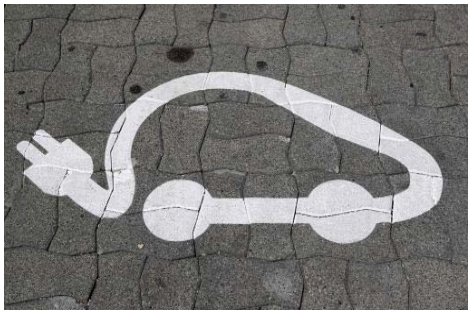
Naturalistic driving - initiatives in Austria

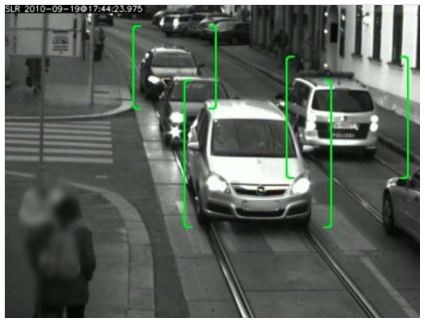


Cornelia Nussbaumer

Content

- Project “drivEkustik”
- “Site-based observation Vienna”
- “100 car study Austria”
- Future opportunities in ND research





Project drivEkustik

Title: “Driver behaviour in and acoustic perception of e-cars”

Customer: Austrian Road Safety Fund

Coordination: Austrian Road Safety Board (KFV)

Partners

- Test & Training international (TTI)
- Austrian Institute of Technology (AIT)
- Austrian Federation of the Blind and Partially Sighted (ÖBSV)
- Swiss Council for Accident Prevention (bfu)

Project drivEkustik

Problem definition

- Increased use of almost soundless e-cars in next years –> effects on road safety?

Why Naturalistic Driving?

- Research in risk factors should not wait for a sufficient number of accidents to analyse!

Expected results

- Recommendations for ensuring road safety of e-cars and future research

Project drivEkustik

Purpose of project

- Compare driving behaviour between users of e-cars and cars with combustion engine
- Analyse behaviour and potential conflicts of vulnerable road users in interaction with e-cars compared to cars with combustion engine
- Measure audibility of different types of e-cars

Project drivEkustik

Driver behavior: recording & comparison

Measurment of driver behavior with e-vehicles; analysis of current data from the EU-project „PROLOGUE“

drivEkustik

Audio perception

Investigation of e-vehicles

Acoustic measurement

Comparison of indooracoustic between e-vehicles and vehicles with combustion engine

Interview

Relationship between technical measurements and subjective observation

Surveillance

Analysis of the behavior of vulnerable road users compared to e-vehicles

Project drivEkustik

WP 2 - Data collection in e-cars with p-drive-system and additional measuring devices (e.g. cameras, GPS, acceleration indicator, …)

WP 3 - Comparison of behaviour and mobility data with existing data of EU-projects PROLOGUE & DACOTA

WP 5 - Site-based observation of interaction between e-cars and vulnerable road users in comparison to other cars

Project drivEkustik

DAS: p-drive-system

Site-based observation

Title:

“Video observation of pedestrian crossing in Vienna”

Customer: City of Vienna

Coordination: Austrian Road Safety Board (KFV)

Partners

- Austrian Institute of Technology (AIT)
- SLR Engineering OG
- ABC Consulting

Site-based observation

Problem definition

8 year old schoolchild killed on pedestrian crossing

Why site-based observation?

Analyse specific risk factors and find new measures

Expected results

Evaluation of video based systems which automatically detect exposure of persons on pedestrian crossing and enables enforcement

Site-based observation

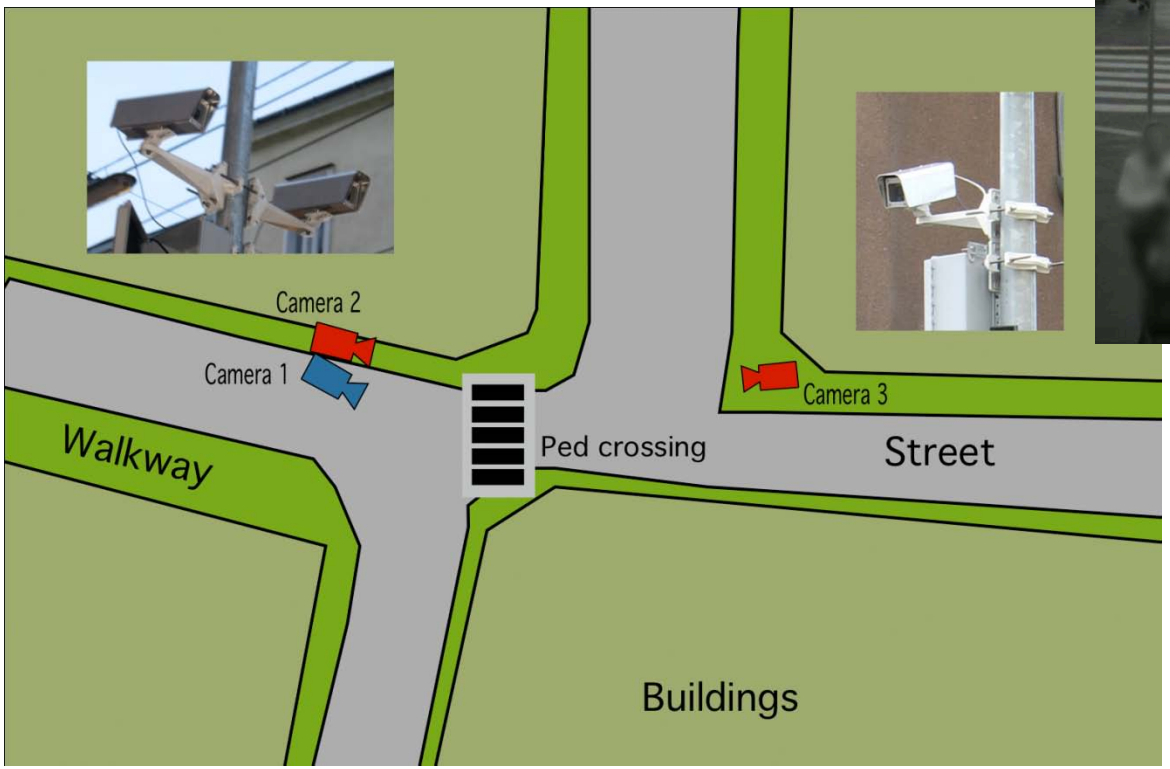
Purpose of project

- Analysis of driving behaviour before pedestrian crossing (e.g. speed, willingness to stop,…)
- Collection of scenarios for exposure of persons on pedestrian crossing
- Analysis of critical situations and assessment of interactions between drivers and pedestrians to identify dangerous situations for future enforcement

KFV

Site-based observation

DAS: video cameras



100 car study

Title: “100 car study Austria”

Customer: self-financing

Coordination: Austrian Road Safety Board (KFV)

Partners

- Negotiations with system providers and other partners under progress

100

100 car study

Purpose of data collection

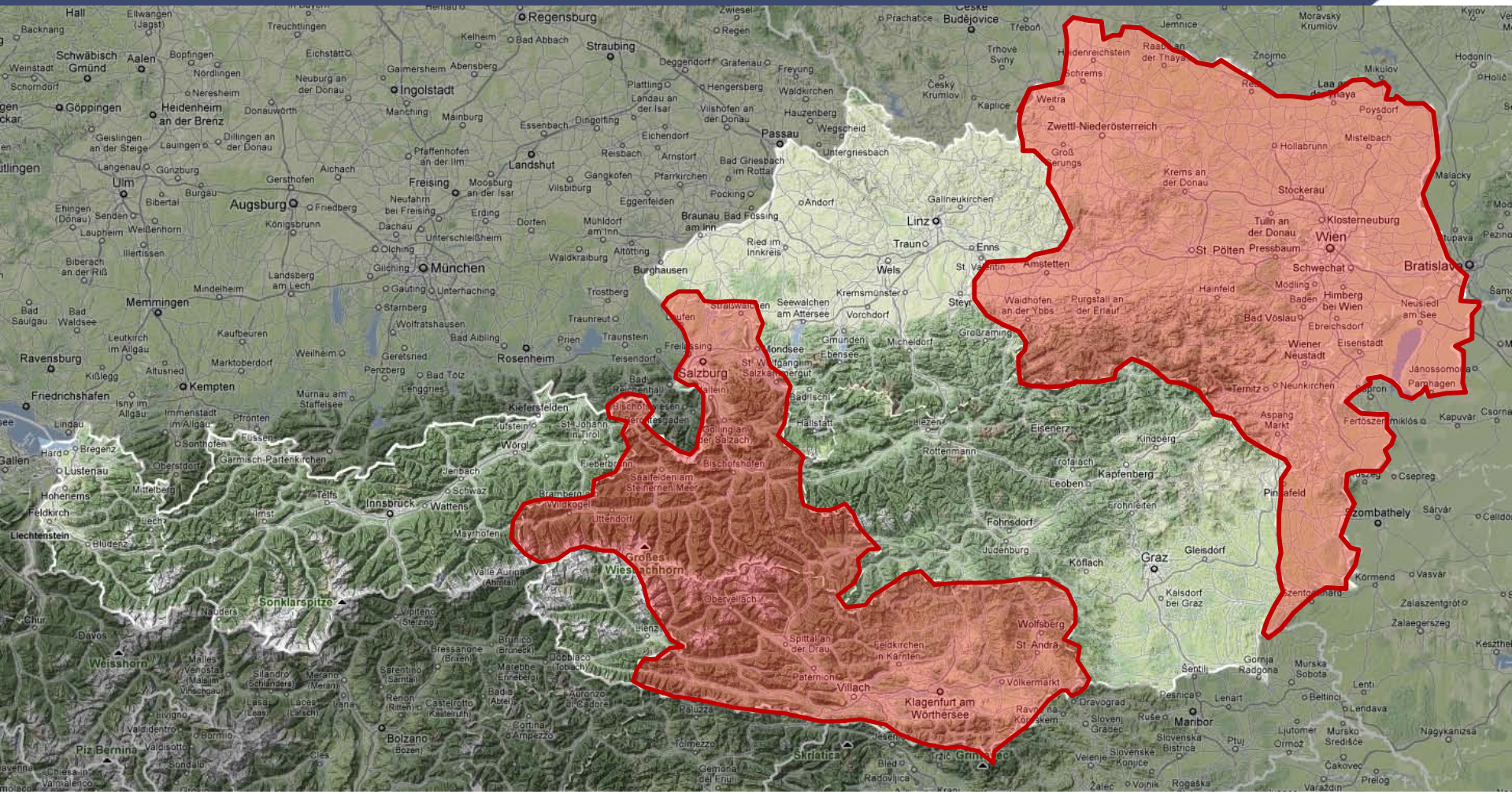
- continious video data in front and inside the vehicle
- continious basic driving parameters according to recommendations of EU-project DACOTA

100 car study

Focus of project

- road user behaviour of novice and elderly drivers
- road user behaviour in normal conditions, near miss accidents and crashes
- information about underreported accident causes as distraction, inattention and fatigue

100 car study



Future opportunities in ND research

- Improve driver training
- Increase effectiveness of enforcement
- Analyse effects of fatigue and drowsiness
- Evaluate new road safety measures?

Thank you for your attention!